

JOANNA COLE & BRUCE DEGEN

The Magic School Bus

Inside a Beehive



GUIDED READING
LEVEL
P
PROGRAM

 SCHOLASTIC

The Magic School Bus

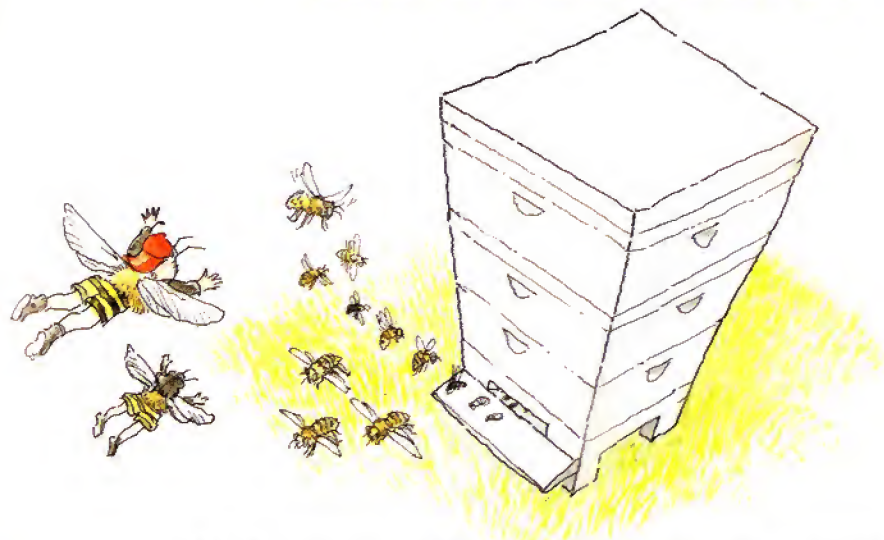
Inside a Beehive





The Magic School Bus

Inside a Beehive



By Joanna Cole / Illustrated by Bruce Degen

Scholastic Inc.

New York • Toronto • London • Auckland • Sydney
Mexico City • New Delhi • Hong Kong • Buenos Aires



The author and illustrator wish to thank Professor Mark L. Winston, Department of Biological Sciences, Simon Fraser University, British Columbia, Canada, for his assistance in preparing this book.

*For their helpful advice and consultation, thanks also to Ray Papedis,
Division of Entomology, Yale-Peabody Museum of Natural History, New Haven, Connecticut;
Eric H. Erickson, Center Director, Carl Hayden Bee Research Center, Tucson, Arizona;
and Mark Richardson, who kindly gave us a tour of his beehive.*

No part of this publication may be reproduced in whole or in part, or stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission of the publisher. For information regarding permission, write to Scholastic Inc., Attention: Permissions Department, 557 Broadway, New York, NY 10012.

ISBN 0-590-25721-8

Text copyright © 1996 by Joanna Cole.

Illustrations copyright © 1996 by Bruce Degen.

All rights reserved. Published by Scholastic Inc. SCHOLASTIC,
THE MAGIC SCHOOL BUS, and associated logos are trademarks
and/or registered trademarks of Scholastic Inc.

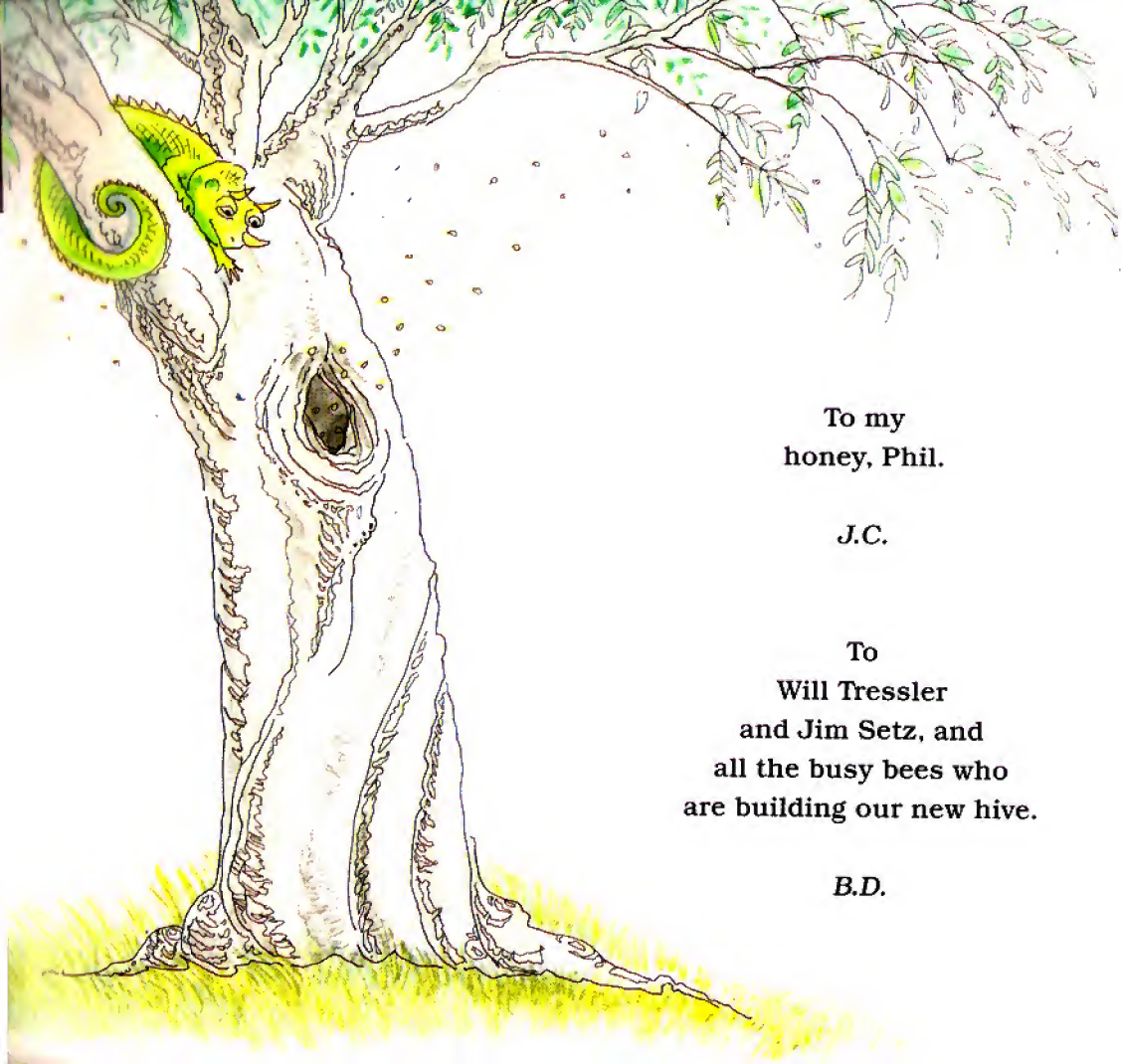
32 31 30 29 28 27 26

5 6 7 8 9/0

Printed in the U.S.A.

The illustrator used pen and ink, watercolor, color pencil,
and gouache for the paintings in this book.





To my
honey, Phil.

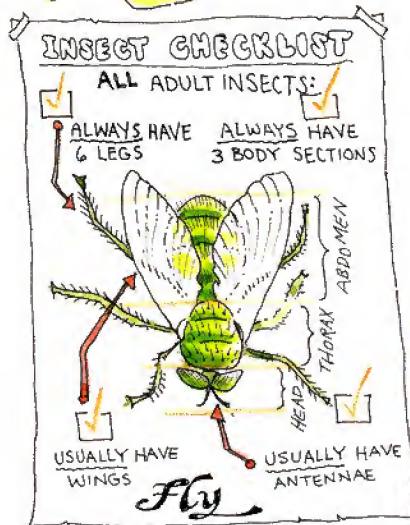
J.C.

To
Will Tressler
and Jim Setz, and
all the busy bees who
are building our new hive.

B.D.



"What a perfect spring day!"
 said Ms. Frizzle, looking out the window.
 We thought it was perfect, too —
 perfect for playing softball.
 But the Friz had something else in mind.
 "It's just right for observing honey bees!"



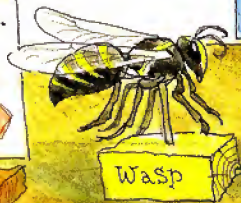
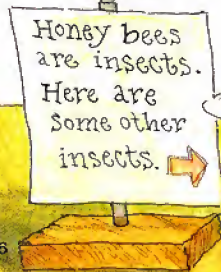
THERE ARE MORE INSECT SPECIES
 ON EARTH THAN ALL OTHER
 ANIMALS PUT TOGETHER!

YES, BUT DO THEY ALL HAVE
 TO BE IN OUR CLASSROOM?

IS A SPIDER
 AN INSECT?

NO! SPIDERS
 HAVE EIGHT
 LEGS AND
 TWO BODY
 SECTIONS.

SPIDERS ARE
 RELATIVES
 OF INSECTS.



We had been studying about all different kinds of insects.

Now Ms. Frizzle said she had found a beekeeper who would show us his honey bee hives.

SOME KINDS OF BEES

by Florrie

There are more than 20,000 different kinds of bees.

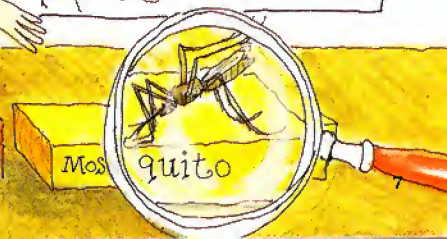
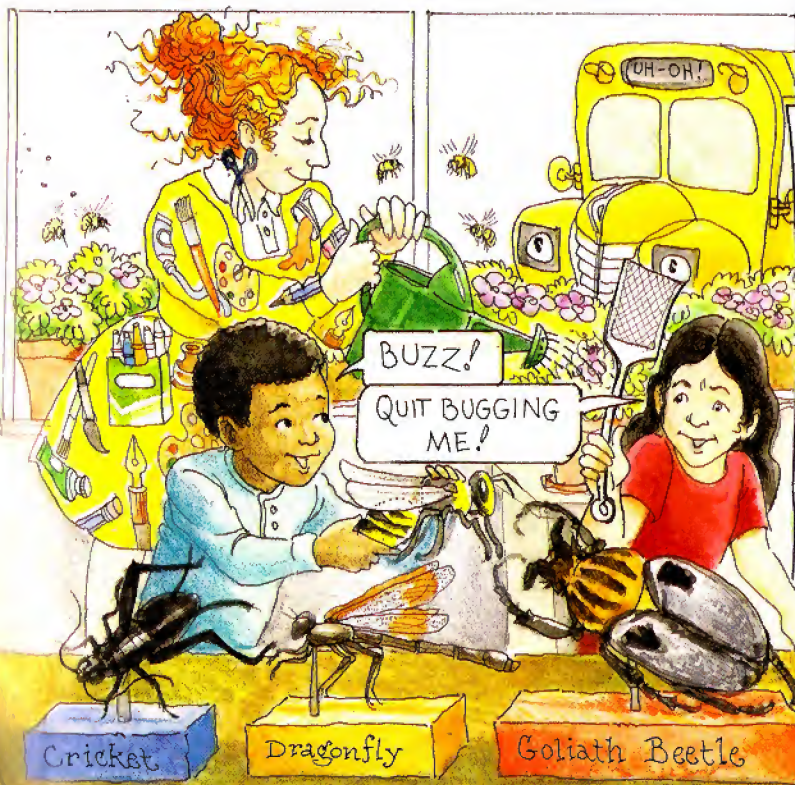
Here are some of them:

HONEY BEE →

BUMBLE BEE

CARPENTER BEE →

ORCHID BEE





"The beekeeper is visiting his hives today. We'll meet him there," said the Friz, and she swept out the door.

BEE ABOUT INSECTS CURIOUS

LIFESTYLES OF THE CREEPY CRAWLIES
by Ima Bugg

LIFESTYLES OF THE BUSY BUZZIES
by Indy Hyve

CAN YOU BELIEVE?
Butterflies have taste buds on their feet!

DID YOU KNOW?
All insects have a hard covering, something like your fingernails — like a little suit of armor.



AMAZING BUT TRUE:
Honey bees have 7,000 tiny eyes in each big eye.



MAYBE THIS WILL BE A NORMAL FIELD TRIP FOR A CHANGE.

I DON'T CALL SIX LEGS NORMAL.

IT IS IF YOU'RE AN INSECT.



Japanese Beetle

As we boarded the old school bus,
Ms. Frizzle talked and talked
about honey bees.

"They make a delicious food
for us to eat," she said.

"They help many plants survive.
And they are wonderful examples
of social insects!"

BEES ARE MY
FAVORITE INSECTS.

WHAT IS YOUR
FAVORITE INSECT,
ARNOLD?

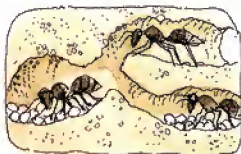
... I'M NOT THE
KIND OF PERSON WHO
HAS A FAVORITE INSECT.

WHAT ARE SOCIAL INSECTS?

by Wanda

Social insects live and
work together in a
community.

Some social insects:



Ants nest
in the ground.

Paper wasps make a
nest out of wood pulp.



Bumble bees nest in
grass-lined holes in the
ground.

Termites nest in wood.



A WORD FROM DOROTHY ANN
Social comes from a
word that means
"friend" or "partner."

WHY DO BEES STING?

by Phoebe

Stinging is the way bees protect their hive.

Bees usually sting only if they have to. That's

because they die soon after they sting.

I'LL STING, BUT ONLY FOR A GOOD CAUSE...

...SUCH AS SAVING THE HIVE.



Honey bees have barbs or hooks, on the end of their stingers.



When a honey bee stings, her stinger gets stuck in the victim's skin. The stinger is pulled out of the bee's body, and the bee dies.

Ms. Frizzle drove out into the country and parked the bus next to the hives.

The beekeeper was late, so Frizzle took out a picnic basket.

"Some light refreshments will pass the time while we wait," she said. Sometimes, our teacher has good ideas!



BEE'S USUALLY WILL NOT STING, UNLESS YOU TOUCH THEM, ANNOY THEM, OR GET TOO CLOSE TO THEIR HIVE.

MAY WE CLOSE THE WINDOWS, PLEASE?



But just as she opened a jar of honey, her elbow knocked a strange little lever. The honey jar fell, and we heard a weird buzzing sound.



It was the bus.
It was vibrating,
and getting smaller.
So was everything in it —
including us!



- o ALLERGIC TO BEE STINGS
by Ralphie
- Some people get very sick
and can even die from
bee stings.
- They have to carry
special medicine.



BEE
LIKE A BEE!
LITTLE

BEEHIVES THROUGH THE AGES

by Tim

Wild bees have always made their homes in hollow trees or logs.

Human-made hives are

- built of straw, pottery, or wood.

Straw



Wood



Tree



Pottery

MEANWHILE

UH-OH!



COMING FROM THE WEST

Before we knew it, the bus looked like a little beehive, and we looked like real bees! We really did!
"All out, class," buzzed the Friz.



BE A BEE, EVERYONE!

DO WE HAVE A CHOICE?

STOP POKING ME WITH YOUR ANTENNAE!

STOP STEPPING ON MY WING!

THESE THINGS DON'T HAPPEN ON MOST CLASS TRIPS.

One by one, we stepped out the door
and looked over at the nearest hive.
At the entrance, worker bees
were standing guard.
"Guard bees usually keep out bees
from other hives," said the Friz.

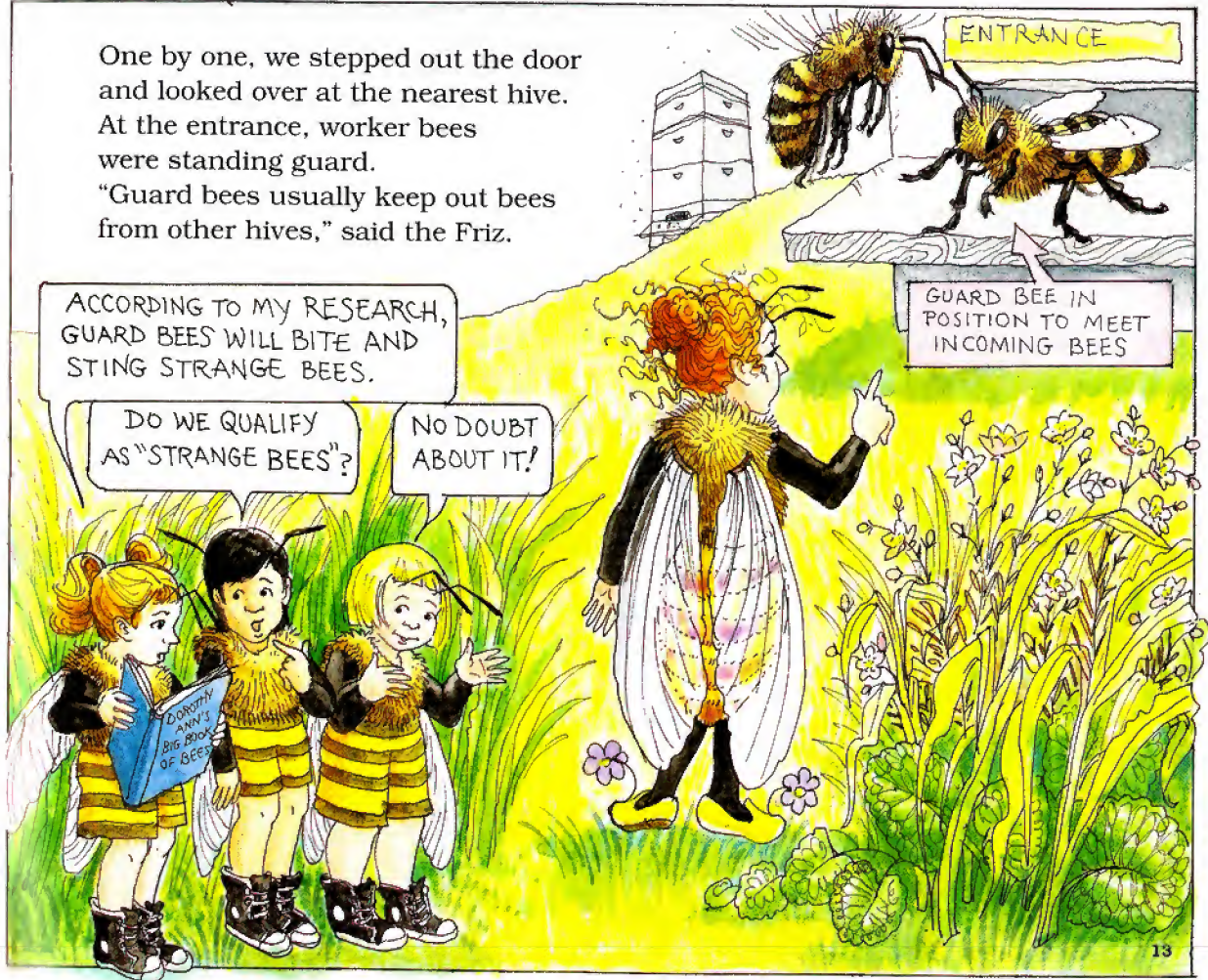
ACCORDING TO MY RESEARCH,
GUARD BEES WILL BITE AND
STING STRANGE BEES.

DO WE QUALIFY
AS "STRANGE BEES"?

NO DOUBT
ABOUT IT!

GUARD BEE IN
POSITION TO MEET
INCOMING BEES

ENTRANCE

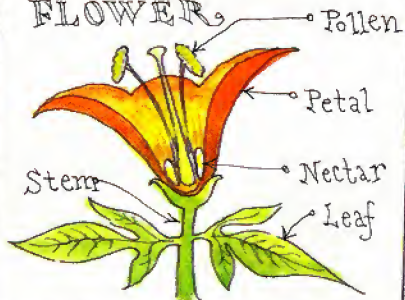


LOOKING FOR BEE FOOD?
TRY A FLOWER...

by Shirley

Bees gather nectar--
a sweet liquid in flowers.
They also collect pollen--
tiny colorful grains
in flowers.

FLOWER



THE AVERAGE BEE
VISITS THOUSANDS
OF FLOWERS
EVERY DAY.

NOW I KNOW WHY
THEY CALL THEM
BUSY BEES!



"There is *one* time when guard bees
may let in a strange bee," said Ms. Frizzle.
"Sometimes a hive may 'adopt' a lost bee —
if it is carrying a lot of bee food.
All bee food comes from flowers.

BEES EAT ONLY NECTAR AND POLLEN,
AND FOODS THEY MAKE FROM
NECTAR AND POLLEN.

WHAT? NO CHIPS?



"We'll have to visit flowers and get bee food in order to gain entrance to the hive. Follow that bee!" shouted the Friz. We flew after a bee that was headed toward some bright flowers.



EXACTLY WHAT DOES SHE MEAN BY
"GAIN ENTRANCE TO THE HIVE"?

SHE MEANS GO INSIDE IT.

I WAS AFRAID OF THAT...



o **BEEES HELP FLOWERS
MAKE SEEDS**

by Alex

As bees visit flowers,
they pollinate them.
This means they carry
pollen from one flower
to another.



When a grain of pollen
joins with an egg cell in
a flower, a seed begins
to grow.

"Observe our bee, children,
and do exactly what she does!"

Ms. Frizzle called.

The bee stuck her long tubelike tongue
deep into a flower and pumped out nectar.
We each did the same with a rubber tube.

"The bee carries the nectar in a pouch
called the honey stomach," Frizzie told us.
We carried our nectar in a tiny bottle.



BE A BEE!
COLLECT NECTAR
AND POLLEN.

MANY PLANTS
CANNOT MAKE SEEDS
UNLESS BEES POLLINATE
THEIR FLOWERS.

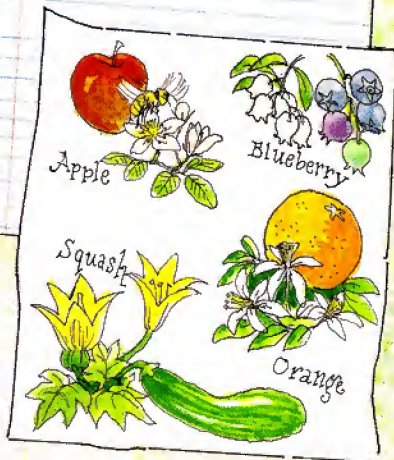
WE NEED
BEES!

Pollen grains rubbed off the flower
and stuck onto the bee's "fur."
With her front and middle legs,
she combed off the pollen and packed it
into pollen baskets —
pouches on her back legs.
Then she returned to the hive.
We packed our pollen and went along.

BEES HELP MAKE FOOD FOR PEOPLE

by John

Bees pollinate many
crop plants -- plants
that give us our food.



AT MY OLD SCHOOL,
WE NEVER COLLECTED
FLOWER PRODUCTS.

IF WE HAVE A LOT,
MAYBE THE BEES
WON'T STING US.

I'M GETTING
EXTRA!



POLLEN
BASKET

POLLEN
BASKET

WE NEED BEES!



BEES "TALK" WITH SMELLS!

by Amanda Jane

PHEROMONES are body chemicals that allow animals to "talk" to each other by smell.

WHEW! DO YOU
HAVE TO "TALK"
SO LOUD?



With pheromones, bees send each other many messages. Here are some of them:

- "I'm a hive-mate."
- "I'm a stranger."
- "I'm a worker."
- "I'm the queen bee!"
- "Danger! Danger!"
- "Defend the hive!"

Bees don't talk in words,
○ but they do communicate.

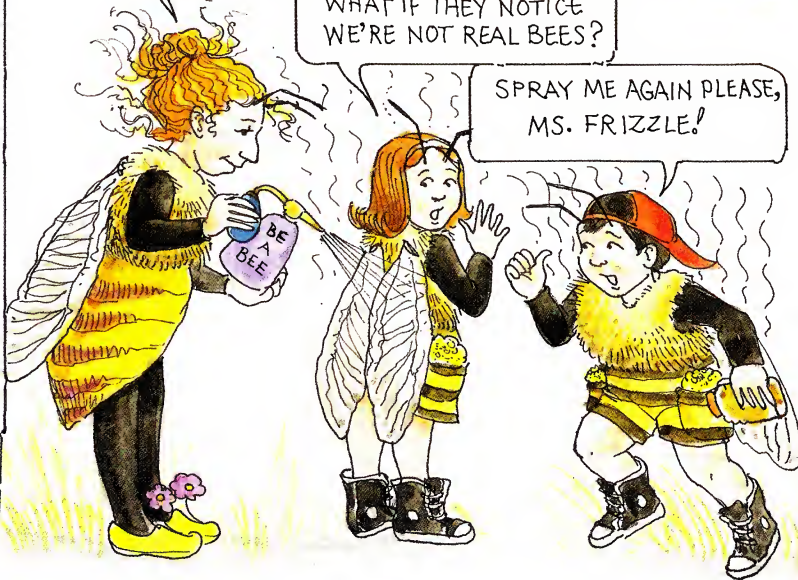
One by one, we landed at the hive.
The Friz sprayed us with a bee pheromone —
a chemical that bees make.
Now we smelled like bees.
Then came the scary part.



THERE MAY BE AS MANY
AS 60,000 BEES IN
ONE HIVE, CLASS.

WHAT IF THEY NOTICE
WE'RE NOT REAL BEES?

SPRAY ME AGAIN PLEASE,
MS. FRIZZLE!



We held our breath as the guard bees
brushed us with their antennae, smelling us.
If they fell for our trick, we'd get into the hive.
If they didn't, we'd get into big trouble!

WE'RE TAKING A BIG CHANCE.

I'LL BUZZ TO THAT!



WORK ORDERS

- | | |
|--|---|
| <input checked="" type="checkbox"/> Guard entrance | <input checked="" type="checkbox"/> Tend queen |
| <input checked="" type="checkbox"/> Clean hive | <input checked="" type="checkbox"/> Feed baby bees |
| <input checked="" type="checkbox"/> Build comb | <input checked="" type="checkbox"/> Collect pollen and nectar |
| <input checked="" type="checkbox"/> Make honey | |
| <input checked="" type="checkbox"/> Fan wings to cool hive | |



WHO'S WHO IN THE HIVE?

by Michael

In a honey bee colony,
there are three castes,
or kinds, of bees:

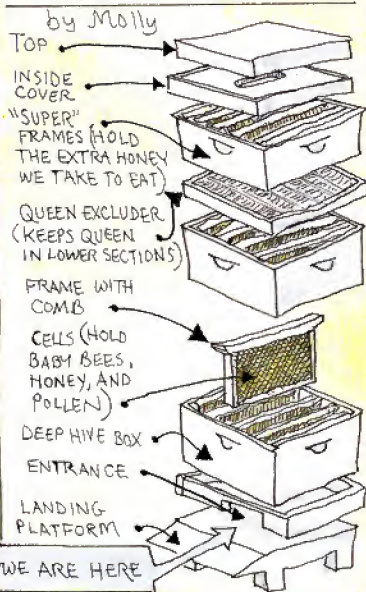
1. The QUEEN: Her job is to lay eggs, eggs, and more eggs!



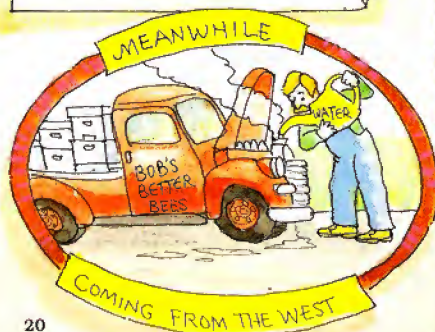
2. The WORKERS: They are all female bees that usually do not lay eggs. Workers do almost all the jobs in the hive.
3. The DRONES are all male bees. A male bee's only job is to mate with a queen.



A BEEHIVE COMES IN SECTIONS



The guards smelled our bee spray and our bee food. They let us pass! Other workers took our nectar and bustled off with it. "Hooray! We're free to explore the hive!" sang out Ms. Frizzle.



The first thing we saw was our bee.
She was doing a strange dance.
Other bees crowded around her,
touching her and listening to her.
Ms. Frizzle said the dance was a "language."
With her dance, the bee "told" others
which way to go to the flowers
she had found.



THE ROUND DANCE

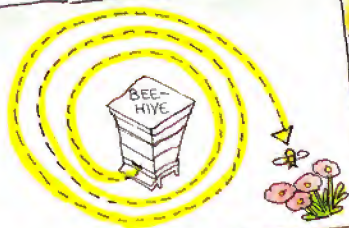
by Phil

This dance tells bees that a food source is close to the hive. The dancing bee walks in a

- o circles, then turns around and goes the other way.



The other bees go outside and fly in a circular pattern near the hive until they find the flowers.



The dance helped the bees find food faster. They did not have to waste time looking for it. They flew off in the direction of the flowers we had visited.



BEES HAVE
MANY DANCES.

EACH DANCE "SAYS"
SOMETHING
DIFFERENT.

DOROTHY
ANN'S
BIG BOOK
OF BEES

New bees gathered around our bee
to get the latest "news."
We passed the dancing bee
and went deeper into the hive.

DOESN'T THE DANCE LANGUAGE OF BEES
GIVE YOU A SENSE OF WONDER, ARNOLD?

YES, I WONDER WHICH
WAY IS OUT.



THE WAGGLE DANCE

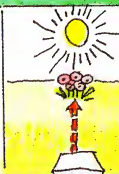
by Carmen

This dance tells bees that
a food source is far away.
It also tells which way to fly.

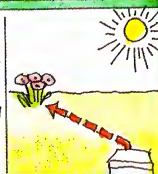
- The dancing bee makes
a figure-eight. She waggles
her body on the middle
line.



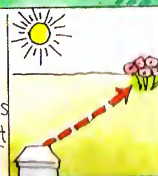
① If the bee
waggles
straight up,
the other bees
fly toward
the sun.



② If the bee
waggles to the
left, the
other bees fly
to the left
of the sun.



③ If the bee
waggles
to the right,
the other bees
fly to the right
of the sun.



WHERE DOES BEESWAX
COME FROM?

by Gregory

Bees make wax inside
their bodies. The wax
comes out through openings
in the bees' abdomens.

LOOK INSIDE ME.



WAX
GLANDS

LOOK UNDERNEATH ME.



OPENINGS
FOR
WAX

FRAME WITH COMB

HONEY
TOLLEN
EGGS AND LARVAE
PUPAE
(CAPPED CELLS)

WE ARE
HERE

DEEP
HIVE
BOX

The inside of the hive was covered with beeswax. The bees had shaped the wax into comb — thousands of little containers called cells. Every cell was a hexagon — a six-sided shape. The comb was so perfect, we couldn't believe bees had made it. "Make comb, class!" said Ms. Frizzle.

ALMOST ALL BEE LIFE
TAKES PLACE ON THE
COMB, CLASS.

BEES DANCE ON THE COMB.

THEY WALK AND REST
ON THE COMB.

BEE
MAKE
HEXAGONS
HELPFUL

We did our best, but our cells came out pretty lopsided. Luckily, the bees didn't notice us. They just tore down our cells and built them over again. Other bees were busy with other jobs, such as making honey.

BEES RAISE BABIES IN THE COMB CELLS.

THEY STORE NECTAR AND POLLEN IN THE CELLS.

THEY MAKE HONEY IN THE CELLS, TOO.

THAT'S SWEET OF THEM.

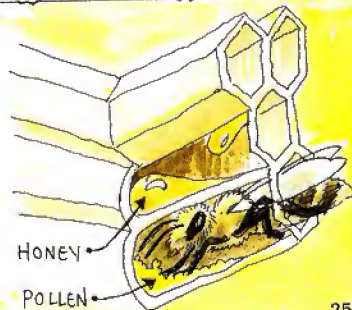
HOW BEES MAKE COMB by Rachel

A bee uses her back and middle legs to pass wax to her front legs.

Then she chews and shapes the wax into cells.



Honey bees make the comb cells tilt up so the honey doesn't drip out!





BE A BEE EVERYBODY.
FAN THE HONEY!

IF WE ACT LIKE BEES
MAYBE THEY WON'T
NOTICE US.

RELAX, ARNOLD.
MAKE YOURSELF
AT HOME.

MY HOME ISN'T
MADE OF BEESWAX.

We saw the bees changing nectar into honey. First, they added chemicals from glands inside their heads. The chemicals changed the nectar-sugars into honey-sugars. Then they spread droplets out and fanned them with their wings. This dried up most of the water — leaving the honey thick, sticky, and extra-sweet. We fanned, too, and helped make honey.



Ms. Frizzle said it was okay to eat some honey, as long as we left plenty for the bees.
“They need a good supply of honey to help them survive over the winter,” she explained.

IT'S COZY IN
A BEEHIVE.

IT'S TASTY IN
A BEEHIVE.

IT'S EASY TO HELP
WITH THIS JOB!

HONEY IS GOOD FOOD!

by Molly

Honey is a very good food for bees, humans, and other animals. But human babies under

one year should not eat raw honey.

YOU'RE NOT
OLD ENOUGH FOR
HONEY, HONEY.



ONE BIG FAMILY

by Carlos

Since the queen is the only female that lays eggs, all the bees in the hive are her children!

We stopped eating honey long enough to notice a bunch of worker bees nearby. They were tending a larger bee with a long thin body. She was the queen bee! As the queen walked from cell to cell, she laid a small white egg in each one.

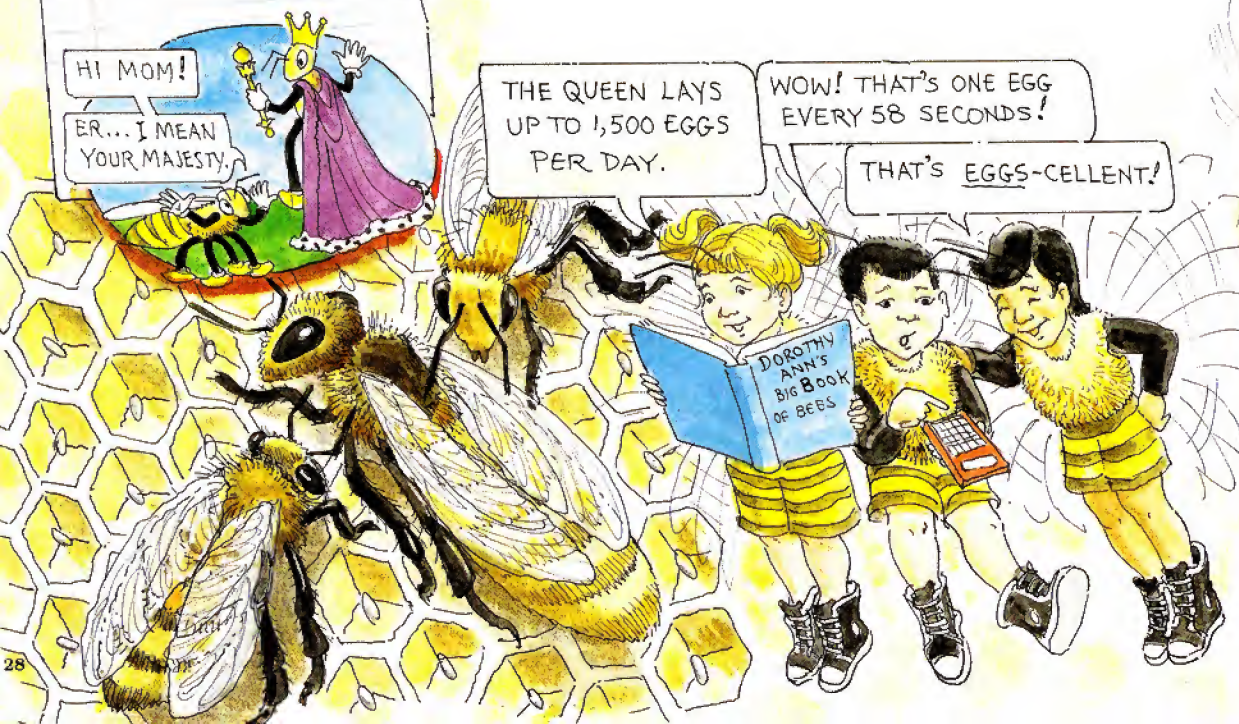
HI MOM!

ER... I MEAN
YOUR MAJESTY.

THE QUEEN LAYS
UP TO 1,500 EGGS
PER DAY.

WOW! THAT'S ONE EGG
EVERY 58 SECONDS!

THAT'S EGGS-CELLENT!



The workers touched the queen with their antennae, they licked her with their tongues, and they fed her by mouth-to-mouth exchange.



BE A BEE!
TEND THE QUEEN!

WE CAN TOUCH HER
WITH OUR ANTENNAE.

WE CAN GIVE
HER SOME
HONEY.

LET'S JUST SKIP
THE MOUTH-TO-
MOUTH PART.

GOOD IDEA.

WHY DO WORKERS TOUCH AND
LICK THE QUEEN? by keesha

From the queen's body,
workers get a pheromone
called "queen substance."

QUEEN SUBSTANCEGLAND

TAKE A MESSAGE.



Queen

Worker #1

- The workers leave the queen and walk through the hive.
- They touch and lick other bees. The other bees get "queen substance," too.

THE QUEEN SAYS HELLO.

I SEE SHE'S FINE.



Worker #1

worker #2

- "Queen substance" tells the bees that the queen is alive and well. Then the workers keep doing their jobs, and everything runs smoothly in the hive.

How To FEED BABY BEES

by Amanda Jane

Nurse bees make baby food
in glands inside their heads.
This is called "brood food."

- The nurses squeeze out
the food right into the
larvae's cells.

In some cells, we saw wormlike creatures.

"These are larvae — baby bees that hatched
out of the eggs," said Ms. Frizzle.

Nurse bees were feeding the babies.

THESE WORMLIKE
THINGS ARE
BABY BEES ?

THEY DON'T
LOOK LIKE
BEES AT ALL.

THEY WILL, KEESHA,
THEY WILL.
ALL THEY NEED
IS THREE THINGS:
FOOD, WARMTH,
AND TIME.

SOMETIMES LARVAE
ARE SWIMMING
IN FOOD.

SOUNDS
DELICIOUS.



Older larvae also eat
honey and "bee bread,"
a food that is a mix of
pollen and honey.



The larvae did nothing but eat fast and grow fast. Every time they got too big for their skins, they molted, or shed their skins. Then they started eating and growing again!

BE A BEE! FEED THE LARVAE!

LARVAE ARE LUCKY.

THEY GET ROOM SERVICE

THE ROYAL TREATMENT

by Phil

If a hive becomes too crowded, workers get ready to start a new hive.

- First they build some special upside-down cells for new queen bees.



- Nurse bees feed ordinary female larvae special food called "royal jelly." Then the larvae develop into queens.

IF A FEMALE LARVA GETS ROYAL JELLY, SHE BECOMES A QUEEN.

IF NOT, SHE ENDS UP AS A WORKER.



- WHY DOES A LARVA EAT A LOT?
SO THE PUPA CAN CHANGE A LOT!

by Arnold

Pupae do not eat. So where do they get the energy to grow the parts of adult bees?

- They use the fat and tissue they stored up when they were larvae.



- ANOTHER WORD FROM DOROTHY ANN
Metamorphosis comes from a word that means "change."

"When it is big enough, the larva stops eating," said the Friz. "It spins a silk cocoon around itself. Now it is called a pupa.

The nurse bees put a wax top on the cell.

Inside, the pupa doesn't eat or grow bigger. It changes into an adult bee.

This is called metamorphosis.



"When the pupae have finished changing into adult bees, they chew their way out of their cells," continued Ms. Frizzle.

We saw new worker bees emerging. They let the air dry them off and started working right away. Meanwhile, we heard excited buzzing. What was happening?

NOW THE METAMORPHOSIS IS COMPLETE, CHILDREN.

THE BEES ARE ALL GROWN UP.

I'M SO PROUD OF THEM.



- SWARMING BEES USUALLY DON'T STING

by Phoebe

Usually bees sting because they have a hive to protect. A swarm does not. It's a colony of bees that's "between hives."

The queen was leaving the hive!
And she was taking almost half
the workers with her!
They flew away in a thick swarm.
What would become of the hive now?



SWARMING IS NATURE'S WAY
OF STARTING NEW BEEHIVES.

BUT HOW CAN THE
OLD HIVE SURVIVE
WITHOUT THE QUEEN?

THERE'S NO ONE TO
LAY EGGS NOW.

DON'T BE SO SURE.
REMEMBER THE
QUEEN CELLS?

WE'RE LOOKING
FOR AN EMPTY
BEEHIVE...

...OR A NICE
HOLLOW TREE.

SWARM

MEANWHILE



THE BEAR FINDS THE HIVE

Ms. Frizzle led the way
to the queen cells.
Two new queens emerged
at the same time.

TWO QUEENS? I THOUGHT...



After they had dried out,
they had a terrible fight.
One queen stung the
other queen to death!

THERE WAS ONLY...



Then she killed the other
queen pupae in their cells.
Now she was the new
queen.

ONE QUEEN IN A HIVE.



YOU WERE
ABSOLUTELY
RIGHT.

THE STRONGER QUEEN
SURVIVES TO PASS ON
HER STRENGTH TO
HER CHILDREN.



- A QUEEN BEE CAN STING
MANY TIMES by Arnold
- Unlike worker bees, which
can sting only once, the
queen bee can pull her
stinger out of the victim
and sting again.

QUEENS MEET DRONES

- by Wanda
- Thousands of drones from many colonies gather in one place.

- When queens are ready to mate, they fly there, too.

Usually drones do not mate with the queen from their own colony.

The worker bees pushed the new queen out of the hive. Ms. Frizzle said she was going on a nuptial flight — a flight to mate with drones.

AFTER THE NEW QUEEN MATES, SHE'LL RETURN TO THE HIVE AND START LAYING EGGS.

HER EGGS WILL HATCH AND REPLACE THE WORKERS THAT LEFT WITH THE OLD QUEEN.

THEN THE HIVE WILL BE AS STRONG AS IT WAS BEFORE.

MAYBE YES, MAYBE NO...

ANOTHER WORD FROM DOROTHY ANN

Nuptial comes from a word that means "wedding."

After the new queen left,
we heard heavy footsteps.
It was a bear, trying to steal the honey
and the bee larvae!
The workers flew out and tried to sting the bear,
but its thick fur protected its body.



IF THE BEAR
BREAKS OPEN
THE HIVE...

AND EATS ALL
THE HONEY AND
THE LARVAE...

THE BEES
MAY NOT
SURVIVE!

WE HAVE TO HELP!



STING HIM!

I CAN'T GET
THROUGH!

HELP!

COMMON HIVE RAIDERS by Tim

o

Skunks



o

Bears



o

Wasps



Bees from

other hives



Bees can defeat most robbers, but bears are hard to beat.

BEWARE

NEVER GET CLOSE TO BEARS. THEY MAY LOOK CUTE, BUT THEY ARE VERY DANGEROUS.

We flew out and dived at the bear, but it kept coming at the hive. "We have to use strategy, class," called the Friz. "We'll lure the bear away!"




BE A BEE!
DEFEND THE
HIVE!

BUT I DON'T WANT TO
HURT A CUTE LITTLE BEAR.

I WOULDN'T SAY
CUTE AND LITTLE.

I'D SAY BIG
AND HUNGRY!





Ms. Frizzle made a beeline for the beehive-bus —
and we followed.

The jar of honey that had spilled before was
still on the floor.

The bear smelled the honey and came after us.
“Ms. Frizzle!” we yelled. “Do something!”
She stepped on the gas, and the bus lurched forward.

THE BEAR WILL
FOLLOW OUR
HONEY AWAY
FROM THE HIVE,
CLASS.

MS. FRIZZLE SPILLED
THAT HONEY BEFORE
WE CHANGED INTO
BEES...

AND BEFORE WE
BECAME BEAR BAIT.

THOSE WERE THE
GOOD OLD DAYS.

THERE'S A LOT OF
HONEY IN THIS
HIVE TODAY!

I'LL TAKE SOME
HONEY TO SELL,
BUT I'LL LEAVE
ENOUGH FOR
THE BEES.

SMOKE IS USED
TO CALM BEES
DOWN.

As we rounded a corner,
the honey jar rolled out the bus door.
As the jar fell, it returned to its normal size.
The bear started eating honey and forgot all about us.

WHAT A JARRING
EXPERIENCE!



Ms. Frizzle reached for a joystick
on the dashboard.

To our relief, the bus lifted off.

It wasn't a beehive-bus anymore. It was a bee-bus!
Down below, we saw the new queen returning home
from her nuptial flight.



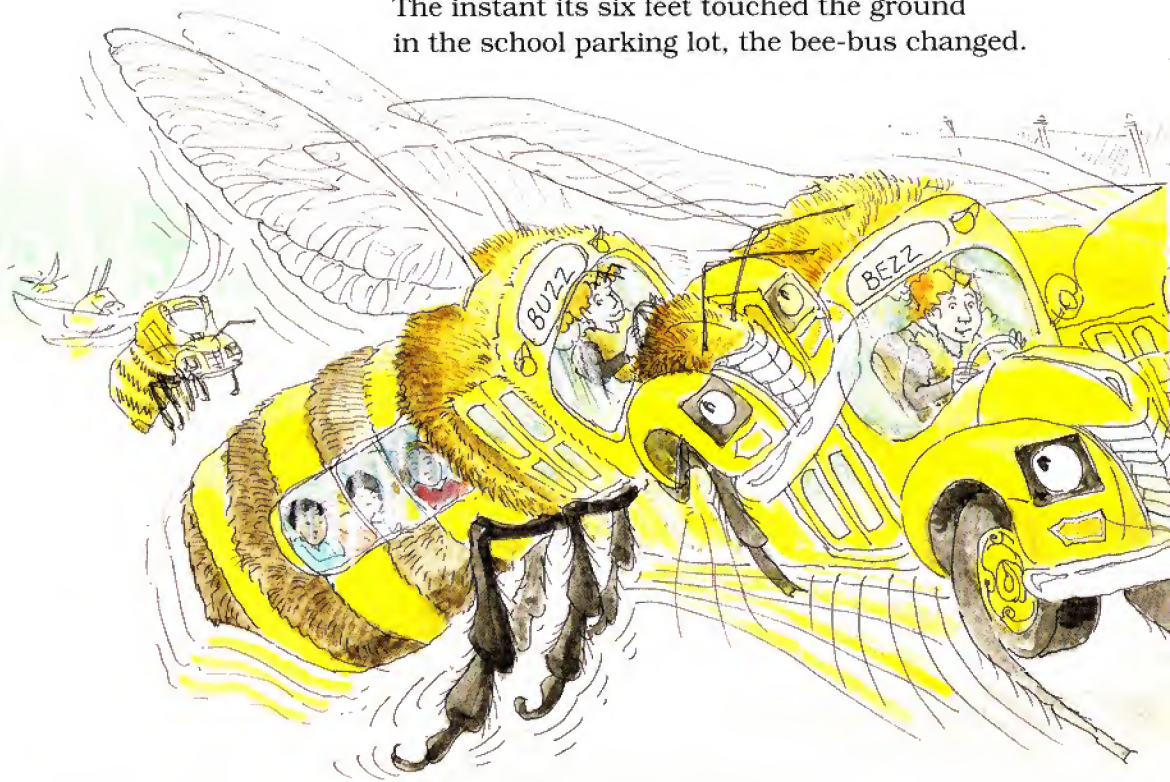
THE HIVE IS SAFE!

WE'RE SAFE!

WE'LL MEET THE BEEKEEPER
ANOTHER DAY, CLASS. RIGHT
NOW, WE'RE RETURNING TO
THE CLASSROOM.

IT'S ABOUT TIME.

We returned home from our flight, too.
The instant its six feet touched the ground
in the school parking lot, the bee-bus changed.



It was a full-size school bus again.
We were human kids again.



THANK GOODNESS FOR THAT
LAST METAMORPHOSIS.

THANK GOODNESS
WE CHANGED BACK
TO OUR REAL SELVES.

I JUST SAID THAT.



BUSY BEE RIDDLES

Q: Why do bees itch?

A: They have hives.



Q: Why did the bee hum
at her singing lesson?

A: She didn't know
the words.



Q: How does a bee
fix her hair?

A: She uses a honey
comb.



Q: What grade did the
students get on
their honey project?

A: They all got B's!



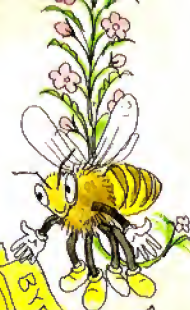
And back in the classroom, we thought
of the perfect project to end the day:
baking honey buns, of course!

I KIND OF MISS
BEING A BEE.

YES, I FEEL LOST
WITHOUT MY ANTENNAE.

I LIKED THE STRIPES.

THE BEST PART WAS
THE HONEY... AND WE
CAN STILL GET THAT
FROM BEEKEEPERS!



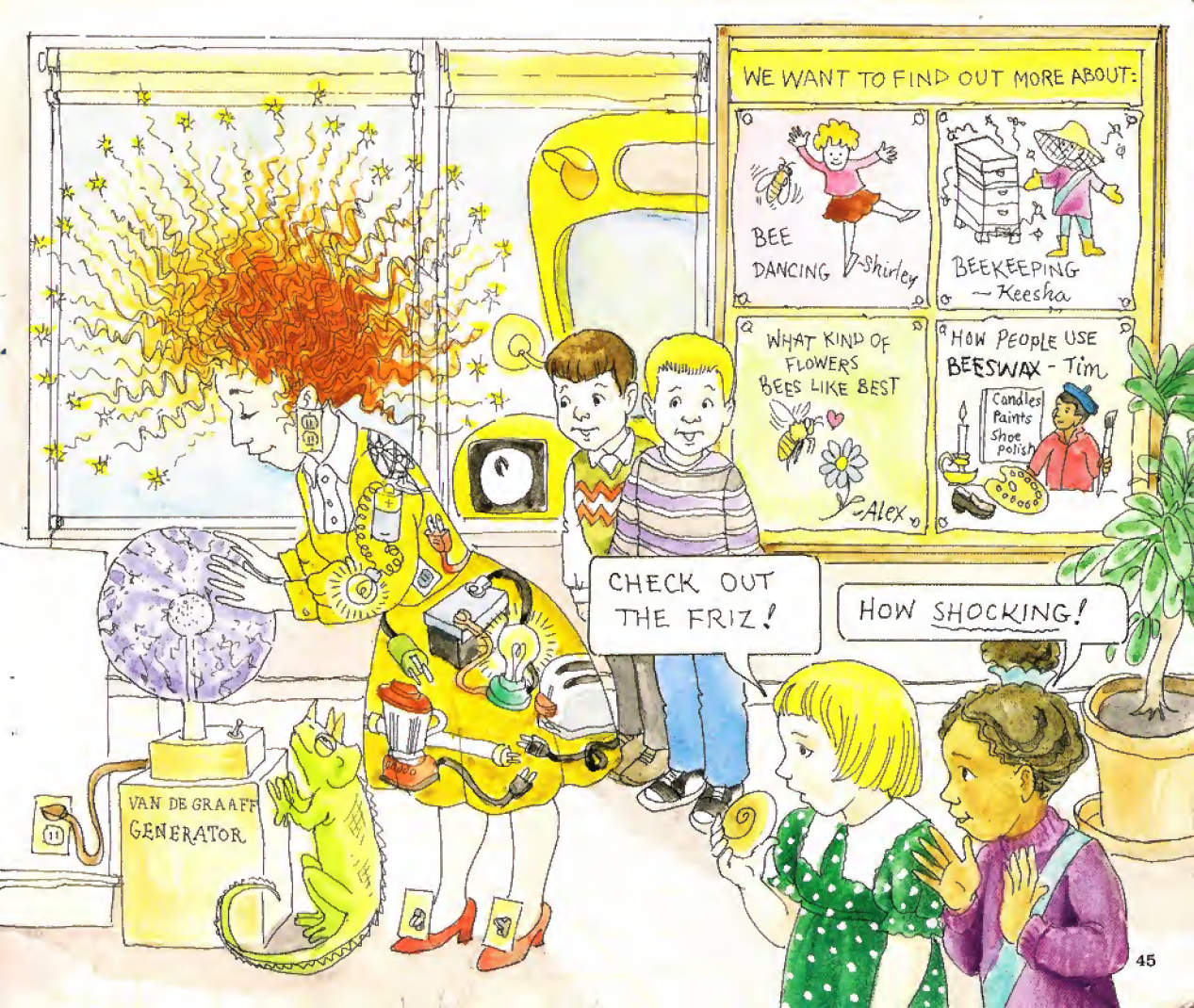
Magic
School
Over

To: Ms. Frizzle
and her class

Bob's
BETTER
BEES

HONEY
FROM
BOB'S
BEEHIVE





WE WANT TO FIND OUT MORE ABOUT:



BEE DANCING
— Shirley



BEEKEEPING
— Keesha

WHAT KIND OF
FLOWERS
BEES LIKE BEST



Alex

HOW PEOPLE USE
BEESWAX — Tim



CHECK OUT
THE FRIZ!

HOW SHOCKING!

VAN DE GRAAFF
GENERATOR

Some Things Can't Happen In Real Life

A SCHOOL BUS CANNOT SHRINK TO THE SIZE OF A BEEHIVE...OR A BEE.

SCHOOLCHILDREN CANNOT BECOME BEES...

FLY TO FLOWERS AND GATHER POLLEN...

OR ENTER A BEEHIVE AND EAT HONEY!



THEY CAN'T?

AW, SHUCKS...

AND I WAS LOOKING FORWARD TO STARTING SCHOOL.



THIS BOOK SHOWS BEES
MAKING HONEY IN A FEW
MINUTES. IT ACTUALLY
TAKES THEM MANY HOURS.

YES, AND IT TAKES BABY
BEES MANY DAYS TO
GROW UP INTO ADULT BEES.



THE NEW QUEEN DOESN'T
START MATING UNTIL SHE
IS ABOUT FIVE DAYS OLD.

THEN SHE SPENDS
A FEW DAYS GOING
ON MATING FLIGHTS.

THIS BOOK SHOWS
HER DOING ALL
THAT IN ONE
AFTERNOON!

AND THIS BOOK
SHOWS INSECTS
TALKING IN
WORDS.

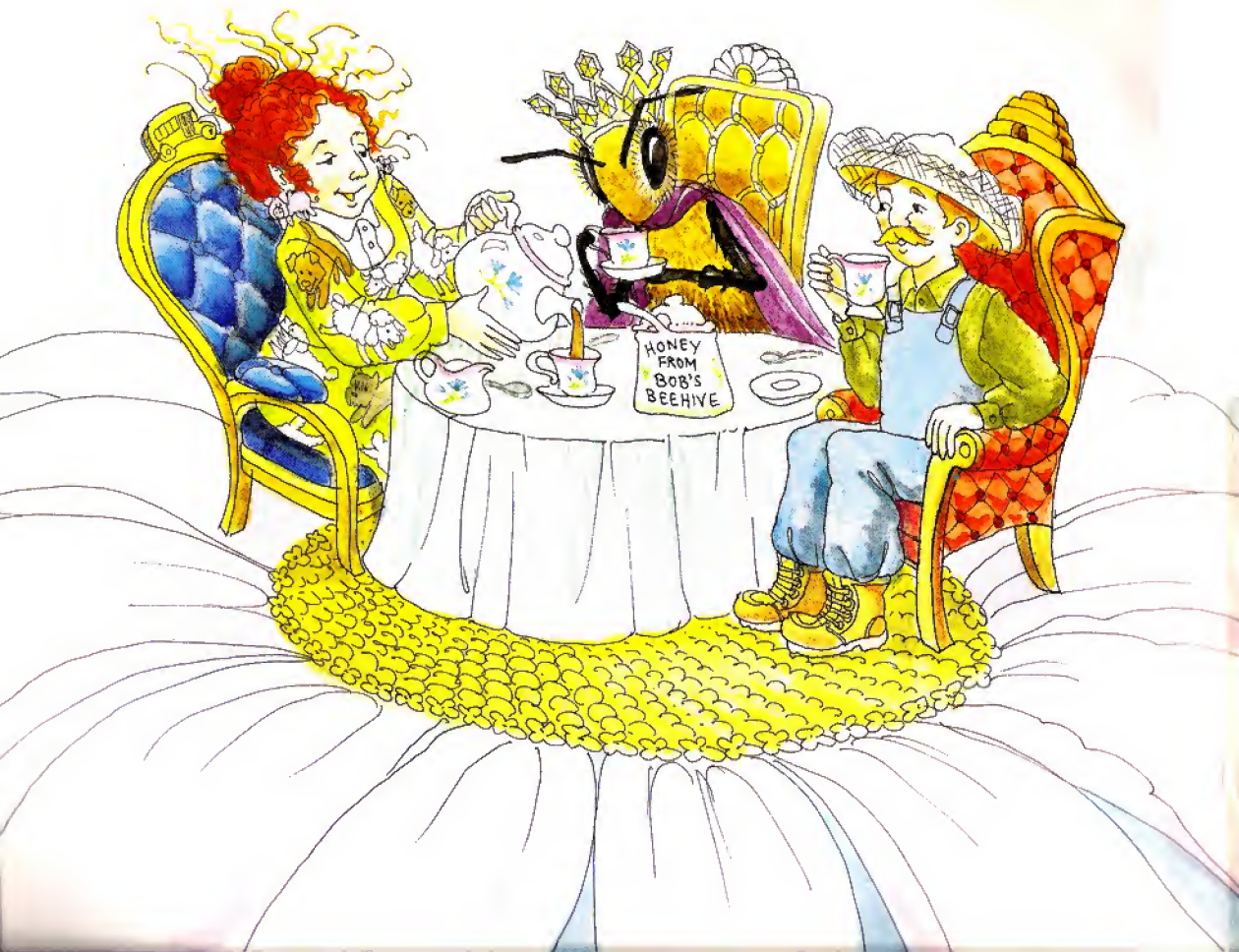
ANYONE KNOWS WE CAN'T DO THAT.

WE CAN'T?

AW,
SHUCKS...

WE'D BETTER BE
QUIET, THEN.



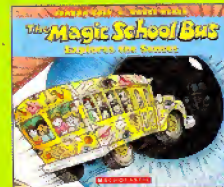
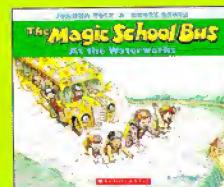
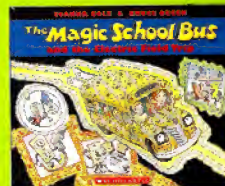
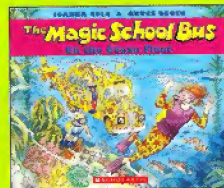
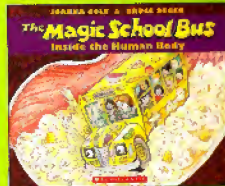
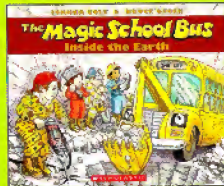
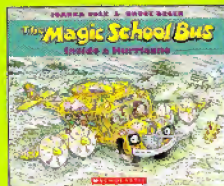




The Magic School Bus

04980

**THE
BESTSELLING
SCIENCE SERIES
EVER!**



ISBN 0-540-25721-5



EAN



50599

\$5.99 US • \$8.99 CAN

SCHOLASTIC

www.scholastic.com/magicschoolbus

RL3 006-009